DOCUMENT RESUME

ED 387 266 PS 023 638

AUTHOR Malsam, Mary E.
TITLE Recall Differences of Elementary Students with Categorized Versus Non-Categorized Word Lists.
PUB DATE 95
NOTE 11p.
PUB TYPE Reports - Research/Technical (143) -- Tests/Evaluation Instruments (160)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS *Classification; Cognitive Processes; Elementary Education; *Elementary School Students; *Recall (Psychology); *Short Term Memory; *Word Lists

ABSTRACT

This study sought to determine whether categorizing information would increase students' ability to recall that information. Two recall tests, consisting of a list of 30 words in random order and a list of the same 30 words grouped into 6 categories, was developed and administered to 2 groups of 16 fourth- and fifth-grade students enrolled in a recreation program. Students had 1 minute to study the word lists, after which they had 2 minutes to recall and write down the words on the list. The results indicated no significant difference in the recall rate between the students given the random list and those given the categorized list. (MDM)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION
CENTER (ERIC)
X This document has been reproduced as received from the person or organization originating it.
☐ Minor changes have been made to improve reproduction quality.
• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

ED 387 266

Running head: RECALL DIFFERENCES OF STUDENTS

Recall Differences of Elementary Students with Categorized Versus Non-Categorized Word Lists

Mary E. Malsam

Bowling Green State University

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY
Mary E. Malsam
TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)"

PS 023638

BEST COPY AVAILABLE

Abstract

The purpose of this study was to determine whether categorizing information would increase an individual's ability to recall that information. The participants were 32 fourth and fifth grade elementary students (16 male and 16 female, mean age =10.41) from a recreation program. These participants were measured using a recall test which I created. The participants studied a word list for 1 minute. After their study time had elapsed they were given 2 minutes to write down as many of the words as they could recall. The results show that there is no significant difference in recall between students that were given categorized word lists and students that had non-categorized word lists.

Recall Differences of Elementary Students with Categorized Versus Non-Categorized Word Lists

Purpose of this Study

The major purpose of this study was to determine whether categorizing would increase an individual's ability to recall information. This was important to me as a fourth/fifth grade teacher for use not only in my own classroom but also to share with my colleagues. I feel that categorizing information will benefit all students in the inclusion program at our school. Elementary children need to have information outlined, categorized, and to have logical connections pointed out to them --in general chunking -- until they reach a maturity level where they automatically do this chunking on their own. I feel this is especially important for children with special needs who generally have lower study skills than regular education students of the same age.

It has been noted that arrangements emphasizing the relationship between ideas and materials enhance learning, and successful learning requires the storage of information in meaningful structures (Crowder, 1976).

Previous Research in this Area

There have been studies done on recall in the past but none that corresponded exactly with my hypothesis. Some similar studies follow. (Wilhite, 1988) studied the effect of headings on short term memory. It was found that headings

seem to facilitate recall of main-idea information. This recall of main-idea was stronger in participants with high levels of pre-existing knowledge of the subject.

In a study two years later (Cohen & Heath, 1990) looked at short-term memory and concluded that material is recalled if it rehearsed, restructured in some way, or is associated with previously stored information. It has also been noted that special education students (learning disabled in this study) generally have major problems with rehearsal and organization (Bauer, 1979).

(Liberty & Ornstein, 1973) reported lower degrees of semantic organization by the fourth graders, in their study, reflected lower recall when compared to the college-age-students.

Hypothesis

My hypothesis is that elementary students with categorized word lists will be more successful on the recall test than elementary students given non-categorized word lists.

Definitions

Success is defined as the total number of correct answers on the elementary student's answer sheet. Therefore, the higher the number of correct answers on the answer sheet the more successful the student.

Method

Participants

Thirty-two fourth and fifth grade elementary students (16 male and 16 female, mean age =10.41) participated in this study. Students were asked to participate in this study as they signed into a recreation program. The students were then placed in matched pairs by gender and the school grade they had just completed.

Measures

Two typed word lists comprised of the same thirty words were used. The first list, A (See Appendix A) had the thirty words in random order in one column down the center of the page. The second list, B (See Appendix B) had the thirty words chunked into the following six categories: instruments, colors, fruits, animals, sports, and school subjects. These sections were separated from one another by several blank lines and formed two columns on the page.

Validity was achieved by having a panel of six special education teachers review both word list A and word list B.

Procedure

Each participant was instructed that they would be taking a test of recall. They would have 1 minute to study a list of words (either A or B) provided them. After the study time had elapsed they would have 2 minutes to write down, on the answer sheet corresponding to their test sheet, as many

of the words as they could recall. Participants would not be allowed to look back at the word list after their study minute had elapsed and I would be doing the timing for each test.

Scoring

Each sheet was hand scored to determine how many of the thirty words the participant had recalled correctly and written down on their answer sheet. There was no penalty for incorrect spellings. Therefore, the participants score equalled the total number of words correctly recalled.

Results

I hypothesized that students with categorized word lists would be more successful on a test of recall than students with non-categorized word lists. Based on a sample size of n= 16 matched pairs (M= 3.3, S.D.= 6.45, alpha set at .05) there is no significant difference in success between students with categorized verses non-categorized word lists. The scores were statistically insignificant, $t(15)= 2.06$, $p>.05$, two tailed.

Discussion

My results failed to support the hypothesis that students with categorized word lists would be more successful on a test of recall than students with non-categorized word lists. I was very surprised at this finding and am speculating as to why I received the results I did. It is possible that students IQ's played apart in the process and

if I had matched on the basis of gender, grade just completed in school, and IQ the results would have been significant. It would also be interesting to do this same study with younger students to see if the results would be different then the ones acquired in this study.

References

Bauer, R. H. (1979). Memory processes in children with learning disabilities. Journal of Experimental Child Psychology, 24, 415-430.

Cohen, R. L., & Heath, M. (1990). The development of serial short-term memory and the articulatory loop hypothesis. Intelligence, 14, 151-171.

Crowder, R. G. (1976). Principles of learning and memory (pp.288-291). Hillsdale, New Jersey: Lawrence Erlbaum Associates.

Liberty, C., & Ornstein, P. A. (1973). Age differences in organization and recall: the effects of training in categorization. Journal of Exceptional Child Psychology, 15, 169-186.

Wilhite, S. C. (1988). Headings as memory facilitators. In M. M. Gruneberg (Ed.), Practical aspects of memory: current research and issues (pp. 531-536). New York, New York: John Wiley & Sons Ltd.

Appendix A

Word List A

PEAR
DOG
BLUE
PIANO
BROWN
MATH
BASKETBALL
VIOLIN
CAT
TENNIS
LEMON
READING
GREEN
COW
FOOTBALL
SCIENCE
FLUTE
PINK
SOCCER
TUBA
ELEPHANT
HISTORY
KIWI
ZEBRA
ENGLISH
TRUMPET
APPLE
BASEBALL
YELLOW
PEACH

Appendix B

Word List B

VIOLIN	YELLOW
PIANO	GREEN
TRUMPET	PINK
TUBA	BLUE
FLUTE	BROWN
APPLE	DOG
LEMON	ZEBRA
KIWI	COW
PEAR	ELEPHANT
PEACH	CAT
SCIENCE	BASEBALL
MATH	TENNIS
HISTORY	FOOTBALL
ENGLISH	BASKETBALL
READING	SOCCER